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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,807	07/22/2003	Kotoyoshi Murakami	740819-1024	5277
22204	7590	11/30/2005	EXAMINER	
NIXON PEABODY, LLP			OMGBA, ESSAMA	
401 9TH STREET, NW			ART UNIT	
SUITE 900			PAPER NUMBER	
WASHINGTON, DC 20004-2128			3726	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

<b>Office Action Summary</b>	Application No. 10/623,807	Applicant(s) MURAKAMI, KOTOYOSHI	
	Examiner Essama Omgba	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 6-8, 11 and 14-20 is/are allowed.
- 6) ☒ Claim(s) 2, 10 and 12 is/are rejected.
- 7) ☐ Claim(s) 4, 5 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The indicated allowability of claims 2 and 10 is withdrawn in view of the newly discovered reference(s) to Hashimoto et al. (US Patent 6,915,939). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Hashimoto et al. (US Patent 6,915,939) and Seiji et al. (JP 202-066760).

With regards to claims 1 and 9, Applicant, at pages 1-3 of the specification to be known as AAPA, discloses a junction device and a junction method for joining a workpiece made of a plurality of plate materials superimposed in their thickness directions at points, the method utilizing a junction tool which is configured by first and second tools placed on a junction axis substantially perpendicular to the superimposed surfaces of the workpiece while nipping the workpiece therebetween and which has a pin protruding from a distal end surface of the first tool along the junction axis and a second tool which has a flat distal end surface wherein while the first tool is rotated, the workpiece is nipped by the junction tool and pressed, then the pin of the first tool is sunk into the

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workpiece, then the workpiece is softened by friction generated by the rotation of the first tool, plastic flow is generated within the workpiece by rotation of the first tool, the vicinity of the superimposed surface of the workpiece is agitated by the plastic flow, after the agitation is sufficiently performed within the workpiece, the first tool is pulled from the workpiece and the softened plate materials are cured. AAPA does not disclose an annular concave groove which surrounds the pin on the first tool or a recess depressed at a distal end surface of the second tool along the junction axis. However Hashimoto et al. teaches such concave groove, see column 9, lines 1-5. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided an annular concave groove which surrounds the pin of the first tool of AAPA, in light of the teachings of Hashimoto et al., in order to improve the holding power of the materials in the joint. Furthermore Seiji et al. teaches in a junction device and a junction method for joining a workpiece made of a plurality of plate materials that, the concave portion 3a of the first tool 1 and the concave portion 5a of the second tool can be provided at either one or both, furthermore a pin-shaped concave portion can be provided instead of the concave portion 3a, see paragraphs 24 and 25 of the on-line translation. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the second tool of AAPA with a recess depressed at its distal end surface, in light of the teachings of Seiji et al., in order to form a better joint.

For claim 12, see figures 1 and 2 of Seiji et al.

***Allowable Subject Matter***

4. Claims 3, 6-8, 11 and 14-20 are allowed.
5. Claims 4, 5 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Jimenez can be reached on (571) 272-4530. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Essama Omgba', written in a cursive style.

Essama Omgba  
Primary Examiner  
Art Unit 3726

eo  
November 26, 2005